

IN THE SPECIFICATION:**Page 4, lines 15-20:**

Also, a fifth form of the present invention is characterized in that, in the first or second form, among component members constituting the analog electronic timepiece, the vibrator is disposed so as to overlap two-dimensionally with a part of the component members which do not affect an increase in thickness after its arrangement.

Page 8, line 25 to page 9, line 10:

More particularly, a battery 1A, a negative terminal 1B, and a positive terminal 1C, the three constituting the power source 1, the time corrector 8 including a crown 8A, a quartz oscillator 201A constituting the oscillation circuit 201, an IC 2A having the electronic circuit 2 formed therein, the time-indicating mechanism 5 including the piezoelectric actuator 341 serving as a drive source, all constituting the analog electronic timepiece, are arranged on the base plate 411 in a well-organized manner. Reference numeral 101 shown in Fig. 2 denotes a circuit retainer which also comes into contact with the battery 1A.

Page 10, lines 9-18:

When the top portion of the abutment portion 341B comes into contact with the periphery of the rotor 343, the rotor 343 rotates in the arrow A direction indicated in Fig. ~~432~~ with a frictional force. Then, a driven wheel 343A integrally formed with the rotor 343 rotates in the same direction. Furthermore, the driven wheel 343A has a fourth wheel 351 engaging therewith, which rotates in the arrow B direction indicated in Fig. 2. A second hand 351B fixed to a rotating shaft 351A is driven with a rotation of the fourth wheel 351.

Page 11, lines 3-7:

The rotating shaft 353A of the second wheel 353 has a driven wheel 353C fixed thereto as shown in Fig. 4. The driven wheel 353C has a minute wheel 354 engaging therewith, and thus the minute wheel 354 rotates in the arrow D direction indicated in Fig. ~~42~~.

Page 16, line 14 to Page 17, line 11:

As described above, the longitudinal vibration and the secondary flexural vibration are generated in the piezoelectric actuator 341, and the longitudinal vibration and the secondary flexural vibration are combined. With this arrangement, the top portion of the abutment portion 341B of the piezoelectric actuator 341 moves along an elliptical path as shown in Fig. 8. Since the top portion of the abutment portion 341B depicts an elliptical path in the clockwise direction, when the abutment portion 341B lies in heavy contact with the rotor 343, the abutment portion 341B presses the rotor 343 with a large force. On the other hand, when the abutment portion 341B lies in light contact with the rotor 343, the abutment portion 341B presses the rotor 343 with a small force. Accordingly, while a large pressing force of the abutment portion 341B is exerted on the rotor 343, that is, when the abutment portion 341B lies in heavy contact with the rotor 343, the rotor 343 is driven to rotate in a displacement direction of the abutment portion 341B. In the present embodiment, when the rotor 343 rotates in the arrow A direction indicated in Fig. 2 in accordance with a displacement of the abutment portion 341B of the piezoelectric actuator 341, the time-indicating mechanism 5 operates.

Page 20, lines 4-17:

In the second embodiment, the piezoelectric actuator 341 is disposed so as to overlap two-dimensionally with a mechanism including the transfer mechanism 4 and the time-indicating mechanism 5. More particularly, the piezoelectric actuator 341 and the rotor 343 are disposed in the same plane as the mechanism including the transfer mechanism 4 and the time-indicating mechanism 5~~so as to face each other, having the mechanism including the transfer mechanism 4 and the time-indicating mechanism 5 interposed therebetween~~, and are disposed at the backsides of the transfer mechanism 4 and the time-indicating mechanism 5 so as to overlap two-dimensionally with these mechanisms. The remaining structure is substantially the same as those that in the foregoing embodiment, and the same parts as in Fig. 3 are represented by the same reference numerals.

Page 23, line 19 to Page 24, line 2:

To be more specific, the part of the component member which do not affect an increase in thickness after the arrangement include a circuit board, an IC circuit, the train wheel, the base plate, a variety of receiving members, a time correcting member, and the circuit retainer. Also, a gear, a pressure spring, a pressing plate, the base plate, and the like disposed above and below a ~~rotor~~driven wheel can be disposed so as to overlap two-dimensionally with the vibrator.

Page 25, lines 13-25:

~~Thus, the piezoelectric actuator is driven by applying drive voltages on central electrodes 401 and electrode pairs 402. In this state, electrode pairs 403 have no drive voltage applied thereon.~~ When the abutment portion 400B of the piezoelectric actuator 400 comes into contact with the periphery of the rotor 343, the rotor 343 rotates in the arrow A direction indicated in Fig. ~~16~~12 with a frictional force. With this arrangement, the driven wheel 343A integrally formed with the rotor 343 rotates in the same direction. In addition, the fourth wheel 351 engaging with the driven wheel 343A rotates in the arrow B direction indicated in Fig. 12, so that the second hand 351B fixed to the rotating shaft 351A is driven.

Page 26, lines 1-10:

The rotating shaft 351A of the fourth wheel 351 has the driven wheel 351C fixed thereto. The driven wheel 351C has the third wheel 352 engaging therewith, and the third wheel 352 thus rotates in the arrow C direction indicated in Fig. ~~13~~12. The rotating shaft 352A of third wheel 352 has the driven wheel 352B fixed thereto. Furthermore, the driven wheel 352B has the second wheel 353 engaging therewith. Accordingly, the minute hand 353B fixed to the rotating shaft 353A of the second wheel 353 is driven with a rotation of the second wheel 353.

Page 28, lines 17-24:

To be more specific, although, since they vary due to Young's moduli of the piezoelectric elements and the backing board, optimization taking these Young moduli into account is necessary, it has been known that a preferable aspect

ratio is about 7:2. Meanwhile, the resonant frequency of the secondary flexural vibration ~~decreases~~varies in accordance with the mass of the abutment portion 341B of the piezoelectric actuator 341.

Page 30, line 25 to Page 31, line 2:

As shown in Fig. 15, a piezoelectric actuator ~~400B~~410 according the present modification has an entire-surface electrode 404 disposed on each surface thereof.

Page 31, lines 16-24:

The piezoelectric actuator according to the first modification illustrated in Fig. 15 has a structure in which the entire-surface electrode 404 is disposed on each surface thereof. Instead of this structure, as shown in Fig. 16, a piezoelectric actuator ~~400C~~420 according to the present modification has a structure in which a drive electrode 405 extending between the abutment portion 341B1 and the balancing portion 341C1 and a detecting-electrode pair 406 are disposed on each surface thereof.

Page 32, line 22 to Page 33, line 2:

As shown in Fig. 17, with the electrode arrangement of a piezoelectric actuator ~~400~~430 according to the third modification, the central electrode 401 and two sets of the electrode pairs 402 and 403, each set arranged so as to intersect with each other with respect to the central electrode 401, are disposed on each surface thereof.

Page 34, line 25 to Page 35, line 6:

Although the central electrodes 401 and the two pairs of electrode pairs 402 and 403 are disposed on each surface of the actuator in the above-described modification, as shown in Fig. 18, in a piezoelectric actuator ~~400A~~440 according to the present modification, the central electrodes 401 are eliminated, and only two sets of the electrode pairs 402 and 403 are disposed on each surface thereof.

Page 36, line 16:~~[8.5] Fifth Modification~~**Page 37, lines 11-25:**

In this case, the part of the component members which does affect an increase in thickness after the arrangement include, for example, the battery and a quartz crystal which are decisive in determining the overall thickness of the timepiece movement. Accordingly, the part of the component members which do not affect an increase in thickness after the arrangement include a circuit board, an IC circuit, the train wheel, the base plate, a variety of receiving members, a time correcting member, the circuit retainer, and a calendar mechanism. Also, since a gear, a pressure spring, a pressing plate, the base plate, and the like disposed above and ~~below~~below the ~~rotor~~rotor-driven wheel are cross-sectionally different from the vibrator, by arranging them so as to overlap two-dimensionally with the vibrator, a greater effect can be obtained.